

LISTING OF THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. - 10 Canceled.

11. (New) A process for manufacturing a power device comprising:
providing a semiconductor die including an epitaxially grown silicon layer of a first conductivity formed over a silicon substrate;
implanting dopants of a second conductivity in a first region of said epitaxially grown silicon layer;
forming a plurality of spaced channel regions of said second conductivity in said epitaxially grown silicon layer;
forming a source region of said first conductivity in each of said channel regions, each source region being adjacent to a lateral channel; and
forming a lateral gate structure over each lateral channel;
wherein said first region of said epitaxially grown silicon is selected to cover an entire active region of said device.

12. (New) A process according to claim 11, further comprising forming a field oxide termination structure at the edge of said active region prior to said implanting step.

13. (New) A process according to claim 11, further comprising forming a field oxide termination structure at the edge of said active region after said implanting step.

14. (New) A process according to claim 11, wherein said gate structure comprises a gate oxide formed adjacent each lateral channel, said gate oxide being formed after said implanting step.

15. (New) A process according to claim 12, wherein said field oxide is formed over said epitaxially grown silicon and etched to provide a window over said first region, wherein said dopants of said second conductivity are implanted through said window.

16. (New) A process according to claim 11, wherein said dopants of said second conductivity are comprised of boron.

17. (New) A process according to claim 11, wherein said dopants of said second conductivity type are comprised of either arsenic or phosphorous.

18. (New) A process according to claim 11, further comprising, forming an oxide interlayer over said active region; opening windows over at least said source regions; and forming a source contact over said active region.